

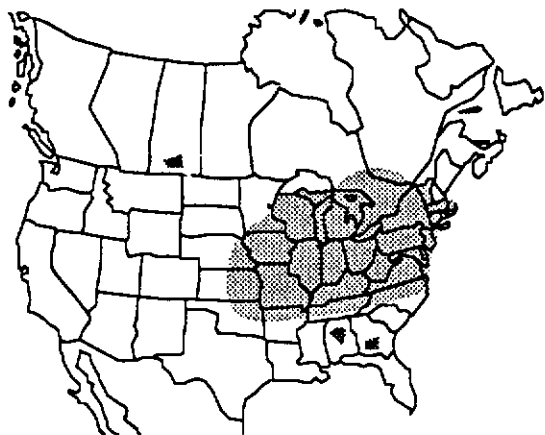
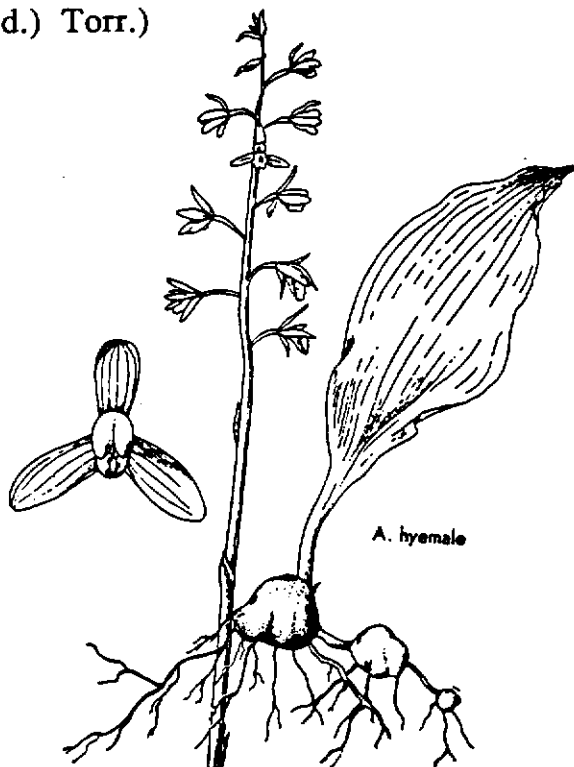
MASSACHUSETTS RARE AND ENDANGERED PLANTS

PUTTY-ROOT

(*Aplectrum hyemale* (Muhl. ex Willd.) Torr.)

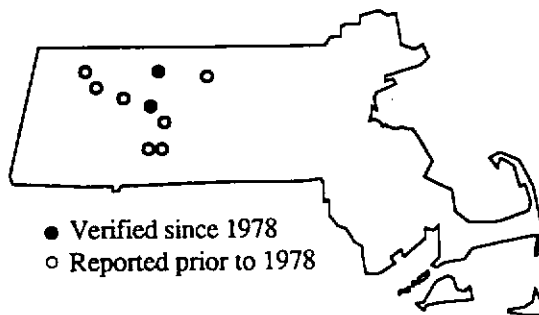
Description

Putty-root is a glabrous (hairless), herbaceous perennial in the Orchid family (Orchidaceae). It rises from globose corms (dense, vertical, underground stems, as in *Gladiolus*) that are filled with a glutinous matter. These corms, which usually occur in pairs, give the species its alternate common name of Adam and Eve. Putty-root's single, dark blue-green, elliptic basal leaf doesn't develop until late summer and is 10-20 cm (4 - 8 in.) long. By flowering season, from late May to mid-June, the leaf has usually withered. Putty-root's 3-6 dm (12 - 23 1/2 in.) high scape, or flower stalk, has only a few sheathing bracts (modified leaves associated with flowers). Its seven to fifteen, greenish, yellowish or whitish flowers are marked with reddish-purple and occur in



Documented Range of
Putty-root

Gleason, H.A. The New Britton and Brown Illustrated Flora of the US & Adjacent Canada. NY Botanical Garden, 1952.



Massachusetts Distribution by Town

a raceme (an elongate, unbranched axis with stalked flowers). Three greenish or yellowish, spreading sepals (members of the outermost floral whorl) subtend shorter petals that arch over the fused male and female flower parts. The lip, or lowermost petal, is three-lobed, whitish, and spotted with magenta. (The rare albino forms lack this spotting.) Putty-root is native to the eastern deciduous forest of North America, where it is the only ground layer herb that produces a fully developed overwintering leaf. *Aplectrum hyemale* belongs to a monotypic genus (one including just one species.)

Range

The range of Putty-root has been documented as extending from Massachusetts, Vermont, and southern Quebec to southern Minnesota, and south to North Carolina and Missouri. Disjunct populations occur in Saskatchewan, southern Georgia, and northern Alabama.

Similar Species

The Crane-fly Orchid (*Tipularia discolor*) somewhat resembles Putty-root. However, Crane-fly Orchid's sepals and lateral petals are greenish-purple, and the lip is purple with two rounded basal lobes.

Habitat in Massachusetts

Putty-root is a plant of rich deciduous woods. (A rich woods is one with moist, nonacidic soils and, usually, a great diversity of species.) Habitats in Massachusetts include a mesic hardwood forest subject to occasional flooding from a nearby stream, a narrow trough between rock outcrops at the headwaters of a brook, and a rich, vernal wet, wooded cove near the headwaters of a brook and surrounded by rocky slopes on three sides. Among its associated plant species are Sugar Maple (*Acer saccharum*), Red Oak (*Quercus rubra*), Showy Orchis (*Orchis spectabilis*), and Hemlock (*Tsuga canadensis*). White Adder's-mouth (*Malaxis brachypoda*) is another rare Massachusetts plant that has been found with Putty-root.

Population Status

Putty-root is presently listed as "Endangered" in Massachusetts, where there are three current stations (discovered or relocated since 1978) in two towns and eight historical stations (unverified since 1978) in seven towns. All current populations are quite small and, hence, vulnerable to loss. In general, orchids are quite particular as to habitat and can be especially threatened by land development. Putty-root is also rare in Alabama, Delaware, Mississippi, Nebraska, New Jersey, Oklahoma, Pennsylvania, and Vermont. It was present historically in Connecticut and New York.